Appendix A New Discipline Studies and List of Preparers

Cultural Resources

Craig Holstein & Roger Kiers, WSDOT, Environmental Services Office, August 2012, *State Route 167 Puyallup River/Meridian Street Bridge Phase, SR 167 Extension – Puyallup to SR 509 Freeway Construction Project*
Pierce County, Washington Discipline Report (Short Report DOT 12-10).
(This report is included with the Addendum to Individual Section 4(f) Evaluation in Appendix B.)

Traffic Analysis

Jim Norman, WSDOT, Olympic Region Traffic Office, February 2012, *SR 167 – Puyallup to SR 509 Environmental Impact Statement* Memo.

John Donahue, WSDOT, Olympic Region Planning Office, May 2012, *Traffic forecasting update for the SR 167 Puyallup River Bridge* Memo.

Supplemental EIS – Preparers

Roger Baugh, WSDOT, Olympic Region SR 167 Bridge Replacement
Harjit Bhalla, WSDOT, Olympic Region Environmental & Hydraulic Services
Brenden Clarke, WSDOT, Olympic Region SR 167 Bridge Replacement
Ben Rampp, WSDOT, Olympic Region Environmental & Hydraulic Services
Carl Ward, WSDOT, Olympic Region Environmental & Hydraulic Services
Jeff Williams, WSDOT, Olympic Region Environmental & Hydraulic Services

Supplemental EIS – Reviewers

Alix Berg, WSDOT, Olympic Region Environmental & Hydraulic Services
Brenden Clarke, WSDOT, Olympic Region SR 167 Bridge Replacement
Sharon Love, FHWA Washington Division
Jeff Sawyer, WSDOT, Olympic Region Environmental & Hydraulic Services
Rebecca Smith, WSDOT, Eastern Region Environmental Office
Ernie Combs, WSDOT, Environmental Services Office
Larry Mattson, WSDOT, South Central Environmental Office
Dean Moberg, FHWA Washington Division

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Washington State Department of Transportation

Memorandum

February 1, 2012

TO: Brenden Clarke
47440

THRU: Michael Villnave / Rob Peterson

FROM: Jim Norman
(360) 357-2633

SUBJECT: SR 167 – Puyallup to SR 509
Environmental Impact Statement

The sections of the above referenced subject relating to the traffic analysis have been reviewed. The traffic analysis supporting documentation is still valid as stated in the document.

If you need additional information or have any questions please call.

Washington State Department of Transportation

Memorandum

DATE 5/31/2012

TO: Brendan Clarke / Olympic Region Project Engineer

FROM: John Donahue, P.E. / Olympic Region Planning Office

SUBJECT: Traffic forecasting update for the SR 167 Puyallup River Bridge

Introduction

At your request, our office performed an analysis the traffic count forecast documented in the reports supporting the SR 167 Extension environmental impact statement and ROD. The purpose of the review was to determine a valid approach to traffic forecasting for the Puyallup River bridge location in 2035. In this review, the 2005 baseline traffic counts and 2030 forecast reported in the 2008 Traffic Analysis Report by Perteet, Inc for the SR 167 build condition are compared to more recent model and count information, in order to verify whether growth rates and baseline traffic assumptions represented in the previous work may have changed at the Puyallup River Bridge location since that report was published. The results show that it would be reasonable to use the previous forecasts for the 2030 build condition at the north leg of the River Rd/Meridian intersection location as the 2035 traffic forecast.

Method

The PSRC model version 1.0bb (May 2008) was used in this comparative analysis. The Pierce County TPU model (January 2008) was also checked to ensure the more conservative result was used. Intersection counts from 2011 provided to WSDOT by the City of Puyallup in January, 2012 were used as forecasting baseline. Model forecast period was assumed to be 2006 – 2030. Forecast volume calculations were post-processed using an average between ratio and difference methods. Model output at two nearby bridge crossings was also checked to verify whether the model indicates any shift in traffic balance across the river due to changes in demand characteristics or overcapacity conditions in the network. The results of this comparison showed no substantial percentage shift in traffic among these three crossings, so traffic forecasts were performed at the link level, and not adjusted to account for any potential shifts among these nearby river crossings.

Results

The 2008 report includes baseline traffic counts forecasts at the intersection of River Rd and and Meridian Ave, immediately south of the Puyallup River bridge. The report provides PM peak hour 2005 counts and 2030 forecasts for the SR 167 Extension build condition at the northerly approach to, and departure from, this intersection:

Year	SB	NB
2005	1655	1380
2030	2090	1970
Annual growth rate	0.94%	1.43%

2030 forecast taken from the SR 167 Extension Traffic Analysis Report (Perteet, Inc, 2008)

Our office researched PM peak hour counts taken at this same location in 2011, and developed a 2030 forecast at this same location. Forecasts were performed using both the PSRC PM period model, and the Pierce County models. The PSRC model results were used as they represented, on average, the more conservative figures:

Year	SB	NB
2011	1512	1187
2030	1777	1475
Annual growth rate	0.85%	1.15%

2030 forecast based on 2011 traffic counts and current PSRC PM period model

Note that although there was a lane restriction introduced on the bridge in February, 2011, its not expected that this has reduced traffic below what would be expected. This is because the restriction did not disallow heavy vechicles, but only moved them to the outside lane. This assumption is corroborated by the annual traffic report record immediately north of the River Rd/Meridian Ave intersection, which shows that daily traffic has remained constant, ranging between 32,000 and 33,000, from 2005 – 2011.

The current PSRC model was also used to verify the anticipated growth rate from 2030 to 2040, and this rate was applied to the forecast using the current PSRC model to determine the 2035 forecast for the River Rd/Meridian Ave location:

Year	SB	NB
2030	1777	1475
2035	1936	1562
Annual growth rate	1.73%	1.15%

2035 forecast based on 2011 traffic counts and current PSRC PM period model

A comparison of the 2030 forecast, from the 2008 report, and the most recent counts and current PSRC model follows:

Year	From	SB	NB
2030	2008 report	2090	1970
2035	Current counts/model	1936	1562
Difference		154	408
% Difference		+8%	+26%

Comparison of 2030 forecast from the 2008 Perteet report, and the 2035 forecast based on 2011 traffic counts and current PSRC PM period model

Summary and Conclusion

The results show that the 2030 forecast from the 2008 report is higher than the 2035 forecast by 8% and 26% respectively. Reasons for these differences include the use of the 2011 traffic count as a forecasting baseline, which is lower than the 2005 count that was previously used, and the lower growth rate for both directions from 2006 – 2030 found in the most recent model. Although the PSRC model is projecting a higher growth rate between 2030 and 2040, this is not enough of an increase to overcome the difference between the previous and current, and lower, 2030 forecasts.

We recommend assuming that it would be reasonable to use the previous forecasts for the 2030 build condition at the north leg of the River Rd/Meridian intersection location as the 2035 traffic forecast., and that this approach represents a conservative approach to updating environmental documentation for this project.